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AFRICA2MOON: A LUNAR RADIO ASTRONOMY ARRAY TO PERFORM NEW SCIENCE IN THE  
SUB-10MHZ RANGE

**Abstract**

In recent decades, our knowledge of the Universe has been advanced by developments in ground-based as well as space-based observation infrastructure. However, there remains a region mostly hidden from view: the sub-10MHz electromagnetic frequency band. Earth's atmosphere is almost completely opaque to wavelengths greater than around 30m and thus observation of the radio sky at longer wavelengths is best performed from beyond Earth. The far side of the Moon is a unique location from which to perform such observations, due to physical shielding which prevents natural and technological radio interference. Here, we describe the challenges and opportunities of radio astronomy in the sub-10MHz range, and how Africa2Moon, a simple, remotely implementable radio telescope array designed to operate on the lunar farside, aims to perform new science - including low frequency observations of the brightest discrete radio sources like the Sun and Jupiter while contributing to improved characterisation of the low frequency foreground towards measurement of the highly redshifted 21cm signature of the early Universe - as well as to inspire increased participation in space exploration by young people in Africa.